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EXAMINER

MEUCCI, MICHAEL D

ART UNIT

PAPER NUMBER

2142

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,708

Applicant(s)

COSTANZO ET AL.

Examiner

Michael D. Meucci

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 19-39 and 41-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-39 and 41-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the applicant's request for reconsideration filed on 04 May 2005.
2. Claims 1-17, 19-39, and 41-62 are currently pending.

Drawings

3. The replacement drawings were received on 04 May 2005. These drawings are acceptable.

Response to Amendment

4. Examiner acknowledges amendment made to claim 24 to overcome the objection. This objection has been withdrawn.
5. Examiner acknowledges amendments and the cancellation of claim 18 made to overcome 35 U.S.C. § 112 rejections. These rejections have been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 21, 43, and 50 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, III (U.S. 5,600,368) hereinafter referred to as Matthews, in view of Fryer (U.S. 6,233,428 B1) and Gear et al. (U.S. 5,170,252) hereinafter referred to as Gear.

a. As per claims 1, 21, 43, and 50, Matthews teaches: plurality of audio and video sources containing information referring to an event (lines 44-56 of column 3 and Fig. 2); a streaming server, streaming the contents of a first audio signal and a first video signal from the audio and video sources to a user (lines 1-15 of column 6); user operated control unit communicating with feed distributor and controlling operation of the feed distributor, so as to instruct the feed distributor to switch between video signals, and feeding a second video signal which is different from the first video signal (lines 17-46 of column 5 and Fig. 1, 3, and 6). As per claim 21, it is well known that multiple audio files from different sources can be used as easily as multiple video files from different sources. Multiple audio files would give the user different points of view, with sound instead of visually.

Matthews fails to teach: the feed distributor connected between the audio/video sources and the streaming server; and switching to a second video signal without altering the first audio signal.

However, Fryer discloses: "Broadcast server 3 is located at a regional office of or ISP office capable of serving a number of centers, and is connected to the routers by a broad bandwidth lease line, serving to split the video stream from a camera in the classroom into multiple video streams depending on demand from subscriber computers," (lines 35-40 of column 6 and shown in Fig. 1).

Gear discloses: "A system (10) has a pipeline (12) comprised of a multi-channel bi-directional video bus (14), multi-channel bi-directional audio bus (16), and a digital interprocessor communications bus (18). The pipeline (12) is equipped with a number of ports (20) where media controller (microprocessor) printed circuit cards (22) can be connected, thus providing a convenient method for connecting media devices (24) to the pipeline (12). In this manner, a media device's video input and output can be optionally connected to any of the video pipes (26) of the video bus (14). Similarly, the media device (24) audio inputs and outputs can be optionally connected to any of the audio bus (16) pipes (26)," (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the feed distributor connected between the audio/video sources and the streaming server. "For live events, broadcast to multiple centers, the regional office's video broadcast server 3 will split a single live stream into multiple streams and route each one to a participating center," (lines 25-28 of column 7 in Fryer).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to switch to a second video signal without altering the first audio signal. "Accordingly, it is an object of this invention to provide a system and method for interconnecting and mixing multiple audio and video streams associated with multiple media devices in which the different interconnections are made by the system in response to user inputs with the physical connections being transparent to the user.

It is another object of the invention to provide such a system and method which will allow video production on a desktop system by a user who is not a trained video technician.” (lines 29-40 of column 2 in Gear).

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the feed distributor connected between the audio/video sources and the streaming server; and switching to a second video signal without altering the first audio signal in the system as taught by Matthews.

8. Claims 2-4, 9, 20, 22-24, 42, 44-46, 48, and 51-53 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1 (2-4, 9, 18, 20), 21 (22-24, 40, 42), 43 (44-46, 48), and 50 (51-53) respectively.

a. As per claims 2, 22, 44, and 51, Matthews teaches: the user-operated control unit is a remote control unit (Abstract, lines 6-17 of column 5 and Fig. 1, 4, 5-7)

b. As per claims 3, 23, 45, and 52, Matthews teaches: the audio and video signals are streamed over a network (line 57 of column 6 through line 32 of column 7, and Fig. 4 and 7).

c. As per claims 4, 24, 46, and 53, Matthews teaches: a client-server system (line 57 of column 6 through line 32 of column 7, and Fig. 4 and 7); the control unit located on the client side (lines 6-17 of column 5 and Fig. 1, 4, 6-7); and the streaming server being located on the server side (line 57 of column 6 through line 32 of column 7 and Fig. 7).

Matthews fails to teach: the feed distributor located on the server side. However, Fryer discloses: "Broadcast server 3 is located at a regional office of or ISP office capable of serving a number of centers, and is connected to the routers by a broad bandwidth lease line," (lines 35-37 of column 6), and shows regional broadcast server 3 on the server side of the system in Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the feed distributor located on the server side. "[The broadcast server] serving to split the video stream from a camera in the classroom into multiple video streams depending on demand from subscriber computers," (lines 38-40 of column 6 in Fryer). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the feed distributor located on the server side in the system as taught by Matthews.

d. As per claims 9 and 48, Matthews teaches: the plurality of audio and video signals comprise a single audio signal and a plurality of video signals, each video signal corresponding to a different point of view of the event (lines 16-22 of column 6).

e. As per claims 20 and 42, Matthews teaches: switching occurs in a preprogrammed way (lines 15-29 of column 1).

9. Claims 5-8, 25-28, 47, and 54 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 4 (5-8), 24 (25-28), 46, and 53 respectively.

a. As per claims 5 and 25, Matthews teaches: the streaming server and the feed distributor are located on the same machine (line 57 of column 6 through line 19 of column 7 and Fig. 7).

b. As per claims 6 and 26, Matthews teaches: the streaming server and the feed distributor are located on different machines (lines 28-35 of column 5 and Fig. 4).

c. As per claims 7 and 27, Matthews teaches: a plurality of client applications (lines 66-67 of column 7); and client-specific user-operated control units communicating with the feed distributor... (line 57 of column 6 through line 32 of column 7).

d. As per claims 8, 28, 47, and 54, Matthews teaches: the streaming server sends difference streams to different clients, each of said clients switchably controlling said video signals independently from the other clients (line 57 of column 6 through line 32 of column 7).

Matthews fails to teach: one audio signal and one video signal being sent to each of said different clients. However, Gear discloses: "The pipeline (12) is equipped with a number of ports (20) where media controller (microprocessor) printed circuit cards (22) can be connected, thus providing a convenient method for connecting media devices (24) to the pipeline (12). In this manner, a media device's video input and output can be optionally connected to any of the video pipes (26) of the video bus (14). Similarly, the media device (24) audio inputs and outputs can be optionally connected to any of the audio bus (16) pipes (26). The switching is accomplished through a pair of analog multiplexers (28) whose connection options have been commanded by local microprocessor (30) resident on the media device microprocessor control board (22).

The local microprocessor (30) receives instructions for the pipeline switch interconnections through the interprocessor serial communications bus (18),” (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have one audio signal and one video signal being sent to each of said different clients. “A software driver interconnects the multiple video and audio devices (24) in different configurations in response to user inputs to a host data processing system so that physical assignments of the device communications on the pipeline (12) are transparent to the user,” (Abstract of Gear). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have one audio signal and one video signal being sent to each of the different clients in the system as taught by Matthews.

10. Claims 10, 32, 49, and 57 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1, 21, 43, and 50 respectively, further in view of Hannah (U.S. 5,706,054).

Matthews teaches: A/V signals are compressed before streaming (lines 16-19 of column 8 and Fig. 4). Since the A/V signals are being decoded, they must have been encoded (compressed) before the server (inherent). Matthews also teaches switching from one signal to another in generic fashion, (lines 36-46 of column 5).

Matthews fails to teach: A/V signals comprise key frames; and the control unit instructs the feed distributor to switch between the first and second A/V signals when a key frame of the second A/V signal is encountered.

However, Hannah discloses: "As is well known in the art, the sequence of video frames input at 39 can include one or more key frames, i.e. frames which are not subject to video compression and which often are used as a reference for the start of a particular video scene," (lines 32-3 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have A/V signals comprising key frames; and the control unit instructs the feed distributor to switch between the first and second A/V signals when a key frame of the second A/V signal is encountered. "Preferably, AFC filtering for a sequence of video frames starts with a key frame," (lines 36-37 of column 3 in Hannah). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the control unit instruct the feed distributor to switch between the first and second A/V signals when a key frame of the second video A/V is encountered in the system as taught by Matthews, Fryer, and Gear.

11. Claims 11-12 and 33-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1 and 21 respectively, further in view of Soepenberget al. (U.S. 6,757,305 B1) hereinafter referred to as Soepenberget.

As per claims 11-12 and 33-34, Matthews fails to teach: the event is described through event parameters; and the user-operated control unit first requests the event parameters...

However, Soepenbergl discloses: "The pointer to the cacheable data can for instance be the SI identification of a service event ("television program") or an identification of where to find an interactive application or other kind of data," (lines 3-6 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the event described through event parameters; and have the user-operated control unit first requests the event parameters to the feed distributor and then instructs the streaming server to start streaming. "The information on the required storage gives an indication on how much storage the set-top box 14 needs, to cache all the cacheable data that is pointed to by the first element in the record. By using the transport stream-wide or network-wide table/descriptor, the set-top box 14 can quickly get a complete view of all the cacheable data. For each transport stream/network, it simply parses a single SI table/descriptor, and it combines the results. The required bandwidth for broadcasting the table/descriptor can be low, i.e. the table only needs to be broadcast occasionally. The set-top box does not need instant access to the table/descriptor, because an access latency does not affect the performance of a direct interaction with the end-user," (lines 6-18 of column 4 in Soepenbergl). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the even described through

event parameters; and have the user-operated control unit first requests the event parameters to the feed distributor and then instructs the streaming server to start streaming in the system as taught by Matthews, Fryer, and Gear.

12. Claims 13, 35, and 58 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, and Soepenbergl as applied to claims 11, 33, and 12 respectively.

Matthews teaches: a number of different points of view of the event (Fig. 2); a unique logic identifier of each point of view (Table 1 of column 4); an initial point of view (lines 5-7 of column 4)

Matthews fails to teach: textual description of each point of view, a size of main screen window visualizing a current point of view, a stream bandwidth, and a duration of the event.

However, Fryer discloses: a textual description of each point of view (Fig. 4); a stream bandwidth (lines 35-45 of column 6).

Official Notice taken of the size of a main screen window visualizing a current point of view and the duration of the event. Window size, duration, as well as bandwidth, and textual descriptions as disclosed in Fryer were very well known in the art at the time of the applicant's invention. Window size is a parameter highly dependent upon the viewing apparatus and is well known for nearly any computer system with a graphical interface. Duration is not as important, particularly for live events in which a set length is not given, but it is also well known that for any streamed

event, a time limit may be enforced by whomever is streaming the event. Textual descriptions as disclosed in Fryer as very well known in the art and can also be employed as an electronic program guide such as with a digital cable service. The stream bandwidth can be given as a parameter for limiting the stream throughput to prevent extended buffering, buffer under-run, and loss of sync problems. This was also very well known in the art at the time of the applicant's invention. It is known in the art that parameter definitions can be highly dependent upon the system and can comprise nearly any aspect of the system's resources, capabilities, and even the actions of the software/hardware.

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide parameters comprising a textual description, main screen window size, stream bandwidth, and duration of the event in the system as taught by Matthews, Fryer, Gear, and Soepenber.

13. Claims 14 and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, and Soepenber as applied to claims 13 and 35 respectively, further in view of Aldred et al. (U.S. 5,649,105) hereinafter referred to as Aldred.

Matthews fails to teach: the logic identifier of each point of view is locally defined.

However, Aldred discloses: "channel_set_id, is a user defined identifier that informs the system that a logical channel belongs to a set of channels," (lines 20-21 of column 28).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the logic identifier of each point of view be locally defined. "The channel_set_id must be unique within an application sharing set, any channel that is to be part of the set must specify the same identifier," (lines 22-24 of column 28 in Aldred). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the logic identifier of each point of view defined locally in the system as taught by Matthews, Fryer, Gear, and Soepenbergh.

14. Claims 15 and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1 and 21 respectively, further in view of Gordon et al. (U.S. 6,208,335 B1) hereinafter referred to as Gordon and Burnard et al. (U.S. 5,613,122) hereinafter referred to as Burnard.

It is inherent in the system that the feed distributor contains a stream reader. The feed distributor is in-line in the system as disclosed by the applicant as well as in the system of Matthews. It is also inherent that the streaming server comprises a stream producer in both systems.

Matthews fails to teach: "the feed distributor comprises a servers session manager, a theatre descriptor, and a stream reader; the streaming server comprising a stream producer; and the user-operated control unit comprises an interface builder.

However, Gordon discloses: "The information server 108 is coupled to the video session manager via data path 116, synchronization clock path 118 and control path

120. The server 108 provides data streams on path 116 and a synchronization clock on path 118 in response to requests for information from the video session manager on path 120," (lines 51-56 of column 4). Gordon also teaches: "The function of the navigator is generated through the use of Navigator descriptor files," (lines 32-33 of column 8).

Burnard discloses: "A user interface builder program allows a user to graphically design windows, dialogs, and view hierarchies," (lines 31-32 of column 29).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the feed distributor comprise a session manager. "The video session manager 122 accomplishes all of the transmission interface requirements of the system 100," (lines 59-60 of column 4 in Gordon). It would also have been obvious to have the feed distributor comprise a theatre descriptor. "These files are used as the basis for construction of all navigator applet screens. A navigator descriptor file defines specific objects (e.g., graphical bitmap, audio, animation and the like) to be used, their physical location on the navigator menu screen, and their interactions with the subscriber's remote control actions. The navigator asset builder software program uses the navigator descriptor files to generate the final pseudo MPEG bitstream that is sent to the set top terminal. The asset builder reads the objects as defined by the navigator asset builder and combines them with the appropriate control information also contained in the navigator descriptor files," (lines 33-45 of column 8 in Gordon). It is presumed by the examiner that "theatre" is to be used as a location descriptor which is fully disclosed by Gordon.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the user-operated control unit comprise an interface builder. "By choosing various User Interface (UI) elements from a menu or palette, a user can build a window or dialog that can be used from another program," (lines 33-35 of column 29 in Burnard).

It is for this reason that one of ordinary skill in the art would have been motivated to have the feed distributor comprise a session manager and a theatre descriptor and have the user-operated control unit comprise an interface builder in the system as taught by Matthews, Fryer, and Gear.

15. Claims 16-17 and 38-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1 and 21 respectively, further in view of Hazra (U.S. 6,510,553 B1).

a. As per claims 16 and 38, Matthews fails to teach: streaming server streams additional A/V signals which are output on secondary windows on the user screen, the secondary windows being different from a main window where the first A/V signal is output.

However, Hazra discloses: "Data signals corresponding to the subscribed layers of the first and second sources may be received in a stream over the fixed bandwidth communications path, output signals may be produced which correspond to the received data signals for the first source, and output signals may be produced corresponding to the received data signals for the second source. The output signals

for the first source may be displayed in a first portion or window of a display, and output signals for the second source may be simultaneously displayed in a second portion or window of the display, thereby providing a picture-in-picture (PIP) display for streaming digital video,” (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the streaming server stream additional A/V signals, which are output on secondary windows on the user screen, the secondary windows being different from a main window where the first A/V signal is output. “The two decoded video sequences from these layers may be displayed in the PIP format as shown. The client system also subscribes to an audio stream corresponding to the primary source (at time T1, this is from signal source A). At some time T262, the user may decide to switch the focus between the two windows. This may be indicated by double clicking a computer mouse button when a mouse pointer is over the PIP area, for example, although any method of indicating input to the graphical user interface may be employed. As a result of the switch indication, the client changes the current subscription of sources to accept only the base layer 58 of signal source A, but to accept the base layer 60 and the enhancement layers 64 of signal source B. This results in a change to the display whereby video data signals from signal source B are the primary source shown in the first portion 52 of the screen and video data signals from signal source A are the secondary source shown in the second portion 54 of the screen. The switch may be delayed by a small time interval so that subscription changes may be synchronized with key frames in the stream that are assumed to be

present at regular intervals. At the time of the switch, the audio subscription may also be changed to maintain the association with the appropriate source selected as the primary source," (lines 31-51 of column 7 in Hazra).

It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the streaming server stream additional A/V signals, which are output on secondary windows on the user screen, the secondary windows being different from a main window where the first A/V signal is output in the system as taught by Matthews, Fryer, and Gear.

b. As per claims 17 and 39, Matthews fails to teach: additional A/V signals occupy bandwidth which is reduced when compared with the bandwidth occupied by said first A/V signals.

However, Hazra discloses: "At time T1 50, a user of client system 38 selects the multimedia content from signal source A 32 as the primary source of the stream and the multimedia content from signal source B 34 as a secondary source of the stream. As a result of this selection, video data from the primary source may be shown on a display in a first portion 52 of the screen, and video data from the secondary source may be shown on the display in a second portion 54 of the screen, thereby providing PIP capability," (lines 8-17 of column 7).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have additional A/V signals occupy bandwidth which is reduced when compared with the bandwidth occupied by said first A/V signals. "The first portion may be larger than the second portion because more information for display is being

received for the primary source as compared to the secondary source," (lines 17-20 of column 7 in Hazra).

It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have additional A/V signals occupy bandwidth which is reduced when compared with the bandwidth occupied by said first A/V signals in the system as taught by Matthews, Fryer, and Gear.

16. Claims 19 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 7 and 27 respectively, further in view of Kunda/McCanta (Google Groups).

Matthews fails to teach: a user controls switching for a number of other users. However, McCanta questions: "

> I don't know what would hold you
>back from doing this. You would simply be limited to having the same
>channel on all of the TV's without buying more special equipment. That's
>where the catch is, as I understand things."

In response, Kunda discloses: "If individual channel selection at the various tv's is not needed, then the output from the receiver to the tv may be split (using the \$15 splitter/amps you mentioned) to as many tv's as desired. If you make sure the satellite receiver you buy uses a UHF remote, then changing channels from any tv is quite simple."

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have a user controlling the switching for a number of other users. Motivation comes in Kunda's response in that the channel may be changed on multiple televisions that are connected to a single receiver via a splitter. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have a user controlling the switching for a number of other users in the system as taught by Matthews, Fryer, and Gear.

17. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claim 21, further in view of Danneels et al. (U.S. 5,410,698) hereinafter referred to as Danneels.

Matthews fails to teach: the plurality of audio and video signals comprise a single video signal and a plurality of audio signals.

However, Danneels discloses: "For example, the video and English audio data streams of the first television program may be related together to form a first channel. That same video data stream may be related to the Spanish audio data stream to form a second channel," (lines 39-43 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the plurality of audio and video signals comprise a single video signal and a plurality of audio signals. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and

posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play,” (lines 10-15 of column 4 in Danneels).

It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the plurality of audio and video signals comprise a single video signal and a plurality of audio signals in the system as taught by Matthews, Fryer, and Gear.

18. Claims 30-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, and Danneels as applied to claim 29.

As per claims 30-31, Matthews fails to teach: each audio signal corresponds to a different listening point of the event and a different audio source.

However, Danneels discloses: “Server 102 is capable of capturing analog audio and video signals from three different sources: (1) signals generated locally by camera 108, (2) signals received by antenna 110 from a remote source, and (3) recorded signals from VCR 112,” (lines 16-20 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have each audio signal correspond to a different listening point of the event and a different source. “Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play,” (lines 10-15 of column 4 in Danneels).

It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have each audio signal corresponds to a different listening point of the event and a different source in the system as taught by Matthews, Fryer, and Gear.

19. Claims 55-56 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claim 50, further in view of Danneels.

Matthews fails to teach: the plurality of audio and video signals comprise a single video signal and a plurality of audio signals; and each audio signal corresponds to a different listening point of the event.

However, Danneels discloses: "For example, the video and English audio data streams of the first television program may be related together to form a first channel. That same video data stream may be related to the Spanish audio data stream to form a second channel," (lines 39-43 of column 4). Danneels also discloses: "Server 102 is capable of capturing analog audio and video signals from three different sources: (1) signals generated locally by camera 108, (2) signals received by antenna 110 from a remote source, and (3) recorded signals from VCR 112," (lines 16-20 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the plurality of audio and video signals comprise a single video signal and a plurality of audio signals. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and

posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have each audio signal correspond to a different listening point of the event and a different source. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the plurality of audio and video signals comprise a single video signal and a plurality of audio signals and have each audio signal correspond to a different listening point of the event and a different source in the system as taught by Matthews, Fryer, and Gear.

20. Claims 59-62 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer and Gear as applied to claims 1, 21, 43, and 50 respectively, further in view of Official Notice.

As per claims 59-62, Matthews fails to teach: the first and second audio signals are audio files and the first and second video signals are video files. However, Official Notice is taken of the audio/video signals being audio/video files. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to store an audio/video signal in Matthews as a file for storage purposes or for transport across

a computer network. Motivation comes simply from the formatting requirement necessitated by computer networks. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to store and audio/video signal as a file in the system as taught by Matthews, Fryer, and Gear.

Response to Arguments

21. Applicant's arguments filed 4 May 2005 have been fully considered but they are not persuasive.

22. (A) Applicant asserts that Matthews does not disclose a streaming server (page 15). The examiner respectfully disagrees.

As to point (A), the applicant argues that the Matthews citation on lines 1-15 of column 6 refer to steps 84-92 of Figure 4 in Matthews and that they refer to viewer selection and display on a TV, not to a streaming server. Although the examiner believes the applicant meant steps 84-92 of Figure 5, the examiner would like to point out that this particular citation was meant to emphasize the streaming aspect of the claim and would further like to point to Figure 7 and lines 5-10 of column 7 of Matthews which discloses: "The head end server 120 receives the multiple camera video signals directly from a satellite feed, or other source. The head end server can then immediately rebroadcast the program to the set-top box 24', as is the case for televising live baseball

action.” This clearly embodies a streaming server capable of streaming audio/video, which, as a result, is displayed on the television in step 92.

23. (B) Applicant asserts that examiner was erroneous in citing lines 17-46 of column 5 in Matthews regarding a feed distributor. The examiner respectfully disagrees.

As to point (B), the applicant argues that Matthews does not disclose a feed distributor connected between the audio and video sources and the streaming server (page 15-16). The examiner would like to point out that this particular citation was meant to emphasize the user-operated control unit (remote control), which is used to switch video signals. This is clearly shown in the cited lines 17-46 of column 5. The examiner believes that the virtual channel selector is in fact a feed distributor, but does not lie *between* the a/v sources and the streaming server as claimed, which is why the examiner previously stated that Matthews failed to teach the feed distributor connected between the a/v sources and the streaming server in the first full paragraph of page 5 of the previous action and included an obviousness rejection for this limitation with Fryer with proper motivation.

24. (C) Applicant asserts that Gear does not teach switching from one video signal to a second video signal without altering the first audio signal. The examiner respectfully disagrees.

As to point (C), the applicant argues that this limitation can not be found in the cited passages. The cited passage discloses the environment wherein this limitation can be performed and the abstract of Gear additionally states: “the *switching* is accomplished through a pair of analog multiplexers (28) whose connection options have been commanded by local microprocessor (30) resident on the media device microprocessor control board (22). The local microprocessor (30) receives instructions for the pipeline switch interconnections through the interprocessor serial communications bus (18). The pipeline (12) is constructed on a motherboard printed circuit board (32) that additionally contains a microprocessor (34) that serves as the local area network controller for the interprocessor communications. A software driver interconnects the multiple video and audio devices (24) in different configurations in response to user inputs to a host data processing system so that physical assignments of the device communications on the pipeline (12) are transparent to the user.” This clearly discloses switching of video signals in the system. The examiner would also like to point to lines 11-19 of column 11 in Gear which clearly teach switching between multiple video (and audio) signals in the system, as well as line 67 of column 3 through line 9 of column 4 which discloses: “Novel elements of this system 10 are (1) the unique inclusion of video data channels, audio channels, and a serial interprocessor communications channel in a single integrated structure, the pipeline 12, (2) unique pipeline 12 design methodology that allows for the construction and interconnection of multiple media devices so as not to introduce distortion and interference, and (3) a pipeline software driver that manages the assignment of the pipes 26 for the various

media interconnect functions such that the physical pipeline 12 assignments become transparent to the user.” This clearly teaches the remaining limitation of “switching without altering the audio signal”. The examiner would like to note that changing video signals without altering the audio signal is very well known in the art and has been accomplished, most notably, whilst switching camera angles at a live sporting event.

25. The remainder of the applicant’s arguments are drawn to point (A), which has been discussed above.

Conclusion

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Heyl et al. (U.S. 5,570,296) discloses synchronized presentation of video and audio signals.

Nelson et al. (U.S. 5,719,786) discloses digital media data stream network management system.

Carmel et al. (U.S. 5,841,432) discloses building and transmitting data file for real time play of multimedia.

Vancelette (U.S. 5,894,320) discloses multi-channel television system with viewer-selectable video and audio.

Yasuda et al. (U.S. 5,949,792) discloses encoding a digital signal, storing signal, and streaming signal.

Day et al. (U.S. 5,996,015) discloses streaming multimedia files.

Nunally et al. (U.S. 6,035,341) discloses multimedia data analysis in intelligent video management system.

Kenner et al. (U.S. 6,269,394 B1) discloses delivery of video data over a computer network.

Rye et al. (U.S. 6,744,463 B2) discloses multi-camera surveillance and monitoring system.

Vancelette (JP 10136277 A) discloses multi-angle views.

Sato et al. (EP 0847200 A1) discloses multi-angle connecting and encoding bit stream.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.


Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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